

Optimisation of conventional radiography examinations performed on obese patients: a pilot study

Conventional Radiography is an imaging modality performed routinely that requires the use of efficient technology and techniques optimised to avoid unnecessary radiation exposure to the patients. The introduction of digital technologies brought great opportunities to reduce radiation dose while maintaining diagnostic image quality. However, adjustments of imaging protocols in clinical practice and consequently in education and training are necessary. The adjustment of technical parameters is paramount to minimise the radiation dose while maintaining an image quality sufficient for diagnosis. Determining the right balance between dose and image quality depends on the anatomical thickness, and it is challenging for obese patients. This project aims to explore the main clinical referrals provided to require medical imaging examinations using ionising radiation for general radiography; and also to identify the optimal techniques and exposure parameters necessary to study pelvis, chest, abdomen and knee using general radiography. A questionnaire to collect data regarding the frequency of conventional radiography examinations and the main clinical indications presented by the physicians will be built up and spread through clinical institutions that collaborate with radiography program at HESAV. The experimental protocols will be developed for conventional radiography organised by anatomical area, including the exposure parameters that can be manipulated in clinical practice. The baseline protocol for each anatomical area will be obtained through a combination of multiple parameters proposed by the European Guidelines, previous studies and data provided by clinical practice.

Research team

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